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Government Affairs Director

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FEDERAL COMMUNICATIONS COMMISSION  
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June 28, 1999

Ms. Magalie Roman Salas, Secretary  
Federal Communications Commission  
445 Twelfth Street, S. W. – Room TWB-204  
Washington, D. C. 20554

Re: Ex parte, CC Docket No. 98-56, Performance Measurements and Reporting Requirements for Operations Support Systems, Interconnection, and Operator Services and Directory Assistance

Dear Ms. Roman Salas:

On Friday, June 25, 1999, Michael Kalb and Frank Simone of AT&T, Lisa Youngers and Karen Kinard of MCI WorldCom and Douglas Nelson of Qwest met with Michael Pryor, Daniel Shiman, Claudia Pabo, John Stanley and Eric Einhorn of the Common Carrier Bureau's Policy and Program Planning Division. The purpose of the meeting was to provide an overview of the Local Competition User Group's performance measurements proposal (version 7.0). The attached presentation was used to facilitate the overview.

Two copies of this Notice are being submitted to the Secretary of the FCC in accordance with Section 1.1206 (b) of the Commission's rules.

Sincerely,

ATTACHMENT

cc: M. Pryor J. Stanley  
D. Shiman E. Einhorn  
C. Pabo

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# Briefing on Performance Measurement

LCUG Presentation to the FCC Staff

June 25, 1999

# Briefing on Performance Measurement

- What must CLECs have in order to provide real choice to consumers?
  - Unfettered choice of broad market entry mechanisms
  - Systems and support that are demonstrably non-discriminatory
  - Swift justice when performance is inadequate

# Briefing on Performance Measurement

## Roadmap for the Discussions

- Essential attributes of an effective approach to performance measurement
  - A comprehensive set of comparative measurements exists
  - Measurements & methodologies are documented in detail
  - Sufficient disaggregation of results is provided
  - Pro-competitive performance standards exist
  - Results are assessed using quantitative methodology
  - Process is subject to initial and periodic validation
  - Results demonstrate compliance
  - Self-enforcing procedures assure expected performance is attained and sustained

# Briefing on Performance Measurement

*“The Commission finds that its performance measurement plan shall include (1) clearly defined measurements (with standards and benchmarks as circumstances dictate); (2) detailed reporting requirements; (3) a dispute resolution mechanism; and enforcement authority to enforce compliance when necessary.” [Georgia Public Service Commission Order, Docket 7892, Issued May 6, 1998, p.14]*

*“Thus, performance measurements that will provide meaningful information concerning the question of performance quality are imperative for allowing the Commission to determine whether an incumbent has fulfilled its duties under state and federal law to provide nondiscriminatory service. [Michigan Public Service Commission, Case No. U-11830, May 27, 1999]*

# Briefing on Performance Measurement

*“Pacific does not adequately acknowledge that quantitative data is needed to support its application; generic statements of compliance will not suffice. Staff has been clear and consistent that to prove its compliance, Pacific should use Commission-adopted performance measures. Quantitative measures can provide Pacific incontrovertible proof that its systems and processes are nondiscriminatory and fair to competitors.” [California Public Utilities Commission Telecommunications Division Final Staff Report, October 5, 1998, p.2]*

# A Comprehensive Set of Comparative Measurements Exists

- All means for market entry must be monitored without preference to any particular strategy
  - Resale
  - Unbundled Network Elements
  - Interconnection
- The quality of each support area must be tracked
  - Pre-ordering
  - Ordering
  - Provisioning
  - Maintenance and Repair
  - Billing

# A Comprehensive Set of Comparative Measurements Exists

Measurement Area	F C C	L C U G	D O J	A T & T	A m e r	S W B T	B S T	P B	B A - N Y	U S W
<b>Pre-ordering</b>										
Average [Query] Response Time	v	v	v	v	v	v	v	v	v	v
<b>Provisioning</b>										
Average Completion Interval	v	v	v	v	v	v	v	v	v	v
Percentage Due Dates Missed or Percentage Completed on Time	v	v	v	v	v	v	v	v	v	v
% Complete within "X" Days			v			v	v	v	v	
Average Offered Interval		v		v					v	
Average Coordinated Customer Conversion Interval	v	v	v	v	*		v			v
% Service Loss From Early Cuts		v		v		v		v		
% Service Loss From Late Cuts		v		v		v			v	
Average Interval for Held Orders	v	v	v	v	v		v	v		
% Held Orders > 15 Days		v		v	v		v			v
% Held Orders > 90 Days		v		v	v					v
Percentage of Troubles within "x" days for new orders	v	v	v	v	v	v	v	v	v	v
<b>Order Status Measurements</b>										
Average Reject Notice Interval	v	v	v	v	v	v	v	v	v	v
Average FOC Notice Interval	v	v	v	v	v	v	v	v		v
Average Jeopardy Interval	v	v	v	v			v	v		
Percentage Orders Given Jeopardy Notices	v	v	v	v	v		v	v		
Average Completion Notice Interval	v	v	v	v	v	v	v	v	v	
% Completions/Attempts with no notice or < 24 hours notice		v		v	v					
Percent of Order Flow Through	v	v	v	v	v	v	v	v	v	
Percent Orders Rejected	v	v	v	v	v	v	v		v	v
Average Submissions per Order	v	v	v	v						
% Order Accuracy		v	v	v		v				
<b>Repair and Maintenance</b>										
Average Time to Restore	v	v	v	v	v	v	v	v	v	v
Frequency of Repeat Troubles within 30 Days	v	v	v	v	v	v	v	v	v	v
Mean Jeopardy Interval for Maintenance/Trouble Handling		v		v						



# A Comprehensive Set of Comparative Measurements Exists

[illegible]

# Measurements and Methodologies are Documented in Detail

- Detailed parameters for each measurement must be established in advance, documented and subject to change control
  - Formulae defined
  - All relevant exclusions of data from the measurement process are identified
  - Meaning of terms are set forth and clear
  - Detail of data retained is specified

*Performance measurements must serve a dual purpose: monitor that the direct impact on retail customers and monitor areas where, absent CLEC remedial actions, impact on customers might result.*

# Measurements and Methodologies are Documented in Detail

- *“As you can appreciate, there are important repercussions that may arise from how the measurements are implemented. For example, definitional issues and other details connected with the measures themselves (such as the basis upon which due dates and start and stop times are set in particular measures) could significantly affect the meaning of the data.” March 6, 1998 letter U. S. Department of Justice (D. J. Russell) to SBC Communications, Inc. (L. S. Coonan, Esq.)*

# Sufficient Disaggregation of Results is Provided

- Care must be taken to assure that apples-to-apples comparisons can be made
  - ILECs and CLECs may not operate in the same geographic areas
  - Product complexity may vary
  - Support tasks within a product may differ
- Burden is not the primary issue
  - Need to avoid loss of detail implicit in data that already exists

# Sufficient Disaggregation of Results is Provided

- Only the ILEC possesses the data sufficient to determine “how much disaggregation is enough”
- Disaggregation needs to be to the level where relatively few expected dissimilarities exist
  - same average performance (mean)
  - same variability expected (standard error)
- Results may vary widely due to product mix, activity performed, geography or interface employed

# Sufficient Disaggregation of Results is Provided

- The concern related to the burden of disaggregation is vastly overstated.
  - Assertions of burden are generally vague and exaggerated
  - LECs generally keep extremely detailed records of activities.
    - Maintenance ticket record for POTS will typically identify not only the date and duration but also the specific telephone number, the trouble severity (out-of-service or service affecting), access information on dispatch (no access, customer not ready, requested later) and trouble disposition codes and subcodes (e.g., Central Office, physical or translations)
    - LSR identifies the type of service and activity encompassed by the order

# Sufficient Disaggregation of Results is Provided

- *“Measurements must be refined enough to permit meaningful parity comparisons to be made. That is, if business orders are more complex and handled differently by Ameritech’s retail operations than are residential orders, performance measurements should distinguish these operations. Separate measurements for different customer classes, geographic areas or service products may be required.” [Consultation of the Michigan Public Service Commission at 31-32, CC Docket 97-137]*
- *“At this juncture, the Commission finds that the ILEC should be required to prepare reports and analyze service level data for geographic areas corresponding to the ILECs internal management structure” [metropolitan areas such as Detroit and Grand Rapids] ... “Data for functions wholly completed within a centralized location may be reported on a statewide basis.” [Michigan Public Service Commission, Case No. U-11830, May 27, 1999]*

# Sufficient Disaggregation of Results is Provided

- *“For the record, Staff points to BellSouth’s claim that to implement the LCUG proposal would cost BellSouth an additional \$15,000,000 on a regional level. Even if Staff’s proposal was as detailed as LCUG’s, which it is not, the significance of this expenditure for BellSouth must be put into perspective. The BellSouth nine state region serves approximately 22,000,000 customers. If the \$15,000,000 were amortized over a five-year period, which is consistent with the depreciation period for computers and software, and if BellSouth’s customers were required to pay for the expenditure, it would amount to a little over one cent per month, or \$.60 for the five year period.” [Louisiana Staff Final Recommendation, Docket No. U-22252-Subdocket C, p.5]*



# Pro-competitive Performance Standards Exist

- The applicable standards for performance are clear
  - Where a reasonably analogous function is performed within the ILEC operations, a parity standard applies
    - Analogs within the ILEC operations are indisputable for resale activities
    - Many analogs can be reasonably established for UNEs/UNE combinations as well
  - In all other instances the incumbent must provide an efficient competitor with a meaningful opportunity to compete
    - Specific standards must exist
    - Demonstrate commercial reasonableness
    - State commission validation of reasonableness

# Pro-competitive Performance Standards Exist

- Existence of reasonable analogs should be thoroughly explored before benchmarks are established
  - **Hot Loop Cutover (provisioning):** Retail residential or Business POTS outside move activity. An outside move occurs when a customer, with existing service, moves from one premises to another within the same Central Office area without disconnecting and reconnecting service. [Although an outside move involves disconnecting an existing loop from an operating port and reconnecting a different loop (within the same office) to that same port, the work involved is very similar (i.e., coordinated re-termination). For hot loop cuts, the same loop is moved from an existing port moved to what is effectively a different port (the CLEC collocation point).]
  - **UNE-P Service migration analog (provisioning):** Residential or Business POTS suspend or restore activity. A Suspend activity occurs when (at the customer's request) the ILEC renders service temporarily unusable through modification of the translations. Physical equipment is left in place. A restore is the customer-requested re-initiation of service through ILEC's re-establishment of the necessary translations. Either (but not the combination) of the activities could serve as the analog
  - **Analog UNE Loop (maintenance & repair):** Residential or Business POTS troubles that are isolated to the local loop (e.g., disposition codes of 3 or 4)

# Pro-competitive Performance Standards Exist

- Benchmarking studies provide a quantitative and disclosed method of establishing a meaningful opportunity to compete is provided
  - Relies substantially on existing process experience
  - Detail aligns with the disaggregation appropriate to the measurement
  - Study methodology, assumptions and results are fully disclosed including the mean, standard error, sample size and distribution shape if any sampling is employed
  - Independent audit of the assumption and processes is permitted
  - Periodic updates occur

# Pro-competitive Performance Standards Exist

- *“As the appropriate standard to utilize, the Commission finds that parity with the performance the ILEC provides itself should be the first choice” ...  
[Michigan Public Service Commission, Case No. U-11830, May 27, 1999]*

# Results Are Assessed Using Quantitative Methodology

- Statistical tools provide the means for making fact based decisions with quantified levels of acceptable risk of an incorrect decision
- There is general agreement that statistical testing for difference is appropriate and specific agreement that the LCUG modified z-statistic is effective
  - Pacific Bell and Nevada Bell
  - Bell Atlantic
  - Michigan Commission and the Texas Commission Staff

# Results Are Assessed Using Quantitative Methodology

- The end results of complex systems are being monitored. Therefore quantitative procedures are necessary
  - Statistical tools exist to support comparison of results
  - Both the average result and variability of result are important
  - The probability of erroneous conclusions must be balanced between the ILEC and CLEC
  - Most technical issues of comparison are resolvable
    - sample size
    - assumptions

# Results Are Assessed Using Quantitative Methodology

- Allow for chance variation
  - All the ILEC-CLEC processes that will be measured contain some degree of randomness.
  - Statistical methods provide the ability to detect significant differences in performance, while ignoring differences that are likely to have occurred just by chance.
  - care must be exerted to assure that inadequate disaggregation does not “inflate” variability
- Establish a formal rule of procedure
  - Using statistics, we can establish a formal rule of procedure, where we begin with raw data, and arrive at a decision, either “conformity” or “violation”.
  - Takes subjectiveness out of the decision-making process.

# Results Are Assessed Using Quantitative Methodology

- Procedure should have optimal power for detecting the types of departures from parity that prevent CLECs from competing on equal terms
  - Differences in mean performance
  - More extreme variability in individual results
- The “LCUG modified z-statistic” is sensitive to differences in mean and difference in variation, and has optimal power to detect those situations about which we have the greatest concern.



# Results Are Assessed Using Quantitative Methodology

- Two types of mistaken conclusions are possible.
  - “Type I error” is essentially a false positive, where the ILEC is falsely accused of non-parity, when in fact it is providing service at parity. This type of wrong conclusion disadvantages the ILEC.
  - “Type II error” is a false negative, where the ILEC is falsely determined to have provided parity, when in fact their performance is not in parity. This type of wrong conclusion disadvantages the CLEC.
- The probability of erroneous conclusions must be balanced between the ILEC and CLEC.

# Results Are Assessed Using Quantitative Methodology

- Most technical issues of comparison are resolvable.
  - Small sample sizes can be handled using a permutation analysis procedure
  - Concerns about distribution shapes can likely be handled by appropriate levels of disaggregation.